

THE CLAIMS

The claims, as currently pending in the application, are listed below for the Examiner's convenience.

1. (Previously Presented) An authentication method in a print process that requires authentication, wherein said print process is executed by a printer driver in a client apparatus, said method comprising the steps of:

obtaining, from electronic data for which an instruction to print has been issued, information identifying an application which issued the instruction to print the electronic data, wherein said information is obtained by using an application interface (API) for the printer driver;

executing an authentication request for approving an output process of the electronic data based on the information identifying the application; and

controlling the print process so as to permit execution of a generation of print data, using the printer driver, from the electronic data and from the output process, in response to a success of the authentication, and controlling the print process so as to stop execution of the generation of print data, using the printer driver, from the electronic data, in response to a failure of the authentication.

2. (Previously Presented) The method according to claim 1, further comprising a step of extracting attribute information including the information identifying the application from the electronic data, and

wherein the attribute information contains various kinds of document attribute information including at least one of a document name, application name, document creator/updater, affiliation of the document creator/updater, password, create/update date, which are associated with a document print process.

3. (Previously Presented) The method according to claim 1, further comprising the step of executing, when authentication has succeeded and a print process is executed, an accounting process of expendables associated with the document print process for each user or each department of a group to which a user belongs.

4. (Previously Presented) The method according to claim 2, wherein the attribute information contains various kinds of application attribute information including at least one of an application name, application user, affiliation of the application user, password, use date, which are associated with the application used.

5. (Previously Presented) The method according to claim 1, further comprising the step of executing, when authentication has succeeded and a print process is executed, an accounting process associated with use of the application for each user or each department of a group to which a user belongs.

6. (Previously Presented) The method according to claim 2, wherein authentication is executed by comparing an ID and password found based on the attribute information, and an ID and password that a user inputs to a printer.

7. (Previously Presented) An authentication system in a print process that requires authentication, wherein said print process is executed by a printer driver in a client apparatus, said system comprising:

means for obtaining, from electronic data for which an instruction to print has been issued, information identifying an application which issued the instruction to print the electronic data, wherein said information is obtained using an application interface (API) for the printer driver;

means for executing an authentication request for approving an output process of the electronic data based on the information identifying the application; and

means for controlling the print process so as to permit execution of a generation of print data, using the printer driver, from the electronic data and from the output process, in response to a success of authentication, and for controlling the print process so as to stop execution of the generation of print data, using the printer driver, from the electronic data, in response to a failure of the authentication.

8. to 26. (Cancelled).

27. (Previously Presented) An information processing apparatus communicating with an external processing apparatus which performs an authentication for a print process executed by a printer driver in said information processing apparatus, comprising:

extracting means for extracting, from electronic data for which an instruction to print has been issued, information identifying an application which issued the instruction to print the electronic data;

output means for outputting the information extracted by said extracting means to said external processing apparatus in order to obtain the authentication for the print process based on the information; and

control means for controlling the print process so as to permit execution of a generation of print data, using the printer driver, from the electronic data and from the output process, in response to a success of the authentication, and for controlling the print process so as to stop execution of the generation of print data, using the printer driver, from the electronic data, in response to a failure of the authentication,

wherein said extracting means extracts the information identifying the application from the electronic data for which an instruction to print has been issued by calling the printer driver and an application interface (API) provided in the printer driver, and wherein said API exchanges data between the printer driver and an operating system that operates the electronic data in said information processing apparatus.

28. (Previously Presented) The apparatus according to claim 27, wherein said information further contains various kind of document attribute information including at least one of a document name, document creator, application of the document creator, create date which are associated with a document print process.

29. (Previously Presented) The apparatus according to claim 27, wherein said information further contains an application name indicating an application to be used.

30. and 31. (Cancelled).

32. (Previously Presented) The apparatus according to claim 27, wherein said extracting means calls said API in response to a print instruction inputted from the application.

33. (Previously Presented) A authentication method of an information processing apparatus communicating with an external processing apparatus which performs an authentication for a print process executed by a printer driver in said information processing apparatus, said method comprising:

an extracting step of extracting, from electronic data for which an instruction to print has been issued, information identifying an application which issued the instruction to print the electronic data;

an output step of outputting the information extracted by said extracting step to said external processing apparatus in order to obtain the authentication for the print process based on the information; and

a control step of controlling the print process so as to permit execution of a generation of print data, using the printer driver, from the electronic data and from the output process, in response to a success of the authentication, and of controlling the print process so as to stop execution of the generation of print data, using the printer driver, from the electronic data, in response to a failure of the authentication,

wherein said extracting step extracts the information identifying the application from the electronic data for which an instruction to print has been issued by calling the printer driver and an application interface (API) provided in the printer driver, and wherein said API exchanges data between the printer driver and an operating system that operates the electronic data in said information processing apparatus.

34. (Previously Presented) The method according to claim 33, wherein said information further contains various kind of document attribute information including at least one of a document name, document creator, application of the document creator, create date which are associated with a document print process.

35. (Previously Presented) The method according to claim 33, wherein said information further contains an application name indicating an application to be used.

36. and 37. (Cancelled).

38. (Previously Presented) The method according to claim 33, wherein in said extracting step, said API is called in response to a print instruction inputted from the application.

39. and 40. (Cancelled).

41. (Previously Presented) A computer-readable storage medium storing a computer-executable program for performing an authentication method of an information processing apparatus which communicates with an external processing apparatus performing an authentication for a print process executed by a printer driver in said information processing apparatus, said computer-executable program including:

an extracting step of extracting, from electronic data for which an instruction to print has been issued, information identifying an application which issued the instruction to print the electronic data;

an output step of outputting the information extracted by said extracting step to said external processing apparatus in order to obtain the authentication for the print process based on the information; and

a control step of controlling the print process so as to permit execution of a generation of print data, using the printer driver, from the electronic data and from the output process, in response to a success of the authentication, and of controlling the print

process so as to stop execution of the generation of print data, using the printer driver, from the electronic data, in response to a failure of the authentication,

wherein said extracting step extracts the information identifying the application from the electronic data for which an instruction to print has been issued by calling the printer driver and an application interface (API) provided in the printer driver, and wherein said API exchanges data between the printer driver and an operating system that operates the electronic data in said information processing apparatus.

42. and 43. (Cancelled).